



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,274	09/18/2006	Waichi Yamamura	SH-0058PCTUS	8677
21254 7590 01/11/2008 MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC 8321 OLD COURTHOUSE ROAD SUITE 200 VIENNA, VA 22182-3817			EXAMINER SMITH, CHAD	
			ART UNIT 2874	PAPER NUMBER
			MAIL DATE 01/11/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/593,274

Applicant(s)

YAMAMURA, WAICHI

Examiner

Chad H. Smith

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments filed 11/05/07 have been fully considered but they are not persuasive. Paragraph 0033 states that the distorted portion is corrected by the weight of the glass forming the lower end portion of the optical fiber base material 1 and the support rod 6 hanging from the lower end portion. Furthermore, as it is claimed it "is corrected by its own weight" does not exclude having the support rod included in correcting the distorted portion. Also, the argument of Harada's optical fiber base material not having any distorted portion holds no evidence in the reference, as applicant has not cited such evidence.

### ***Claim Objections***

Claim 19 is objected to because of the following informalities: There is no antecedent basis for -the charge-coupled device- it should read -a charge coupled device-. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 6, 10 – 13, 15, 16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Harada et al. (Japanese PG Pub. # 2000/219530).

Regarding claims 1, 2, 3, 4, 6, 10, 11, 12 and 13 Harada et al. teaches an elongating method of an optical fiber base material, wherein in an elongating process of elongating an optical fiber base material by heating the optical fiber base material in a heating furnace wherein the optical fiber is hung in the furnace by a hanging mechanism (par. 0013) at a temperature in a range of 1,800 degrees Celsius to 1,900 degrees Celsius so that a diameter of the optical fiber base material is reduced (par. 0007), before the optical fiber base material having a distorted portion (as par. 16 shows that there is an inherent bend in the optical fiber parent material) is elongated from an end thereof, the distorted portion of the optical fiber base material is corrected by being heated to be softened in the heating furnace such that the distorted portion is corrected by its own weight (fig. 1) and then the elongating proceeds to achieve a difference between an elongation axis and one of the optical fiber base material and a dummy rod attached to the optical fiber base material (17) is reduced to be no more than 10mm (par. 0007) (inherently as the heat is applied with the weight secured at the bottom of the glass rod, the distorted portion which is located at the heating portion of the glass rod, as shown in fig. 1, at the tapered bottom, is pulled straight, then the elongation process starts). Furthermore, before the optical fiber base material was hung in the furnace it must have been determined to fit without contacting the furnace otherwise the fiber may not fit into the furnace hole.

Regarding claim 5, Harada et al. teaches wherein the optical fiber base material is hung in such a manner that the distorted portion is positioned lower (the distorted portion is lower than the upper surface of heating furnace (12), as lower is not given a reference point in the claim)

and the elongation axis is substantially parallel to a plumb direction (as shown in fig. 1 the elongation axis is parallel to a plumb direction, as a plumb direction is the direction the weight pulls towards the earth do to gravity).

Regarding claim 15, Harada et al. teaches 80mm diameter of optical fiber parent material (par. 0013).

Regarding claim 16, Harada et al. teaches quartz glass (par. 0013).

Regarding claim 18, Harada et al. teaches a dummy rod (17) projecting from the heating furnace.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (Japanese PG Pub. # 2000/219530) in view of Yamamura et al. (U.S. Patent # 6,742,363 B1).

The cited primary reference teaches the basic claimed elongating method as previously discussed in claims 3 and 4 above.

The cited primary reference does not teach wherein the difference is detected by using a noncontact position detecting apparatus, wherein the noncontact position detecting apparatus is one of a laser measuring device and an image processing apparatus.

The added secondary reference teaches a laser beam diameter measuring device for detecting the diameter of the glass material so that a uniform diameter fiber can be produced with minimal attenuation characteristics.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Harada et al.'s elongating method with Yamamura et al. teaching of a laser beam diameter measuring device for detecting the diameter of the glass material so that a uniform diameter fiber can be produced with minimal attenuation characteristics.

Claims 14 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (Japanese PG Pub. # 2000/219530) in view of Katayama. (U.S. Patent # 7,170,603 B2).

The cited primary reference teaches the basic claimed elongating method as previously discussed in claim 11 above, but is silent to using a CCD camera to detect the difference or measuring a position of the elongation axis and obtaining an image of the dummy rod

perpendicularly to the elongation axis. However, the cited secondary reference teaches using a CCD camera as a feedback mechanism to control an alignment method (col. 12, lines 46 - 48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Harada et al.'s elongating method with Katayama's teaching of a CCD camera to act as a feedback to control the speed at which the fiber is elongated to ensure uniformity in its length.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harada et al. (Japanese PG Pub. # 2000/219530) in view of Zushi et al. (U.S. Patent # 5,354,348).

The cited primary reference teaches the basic claimed elongating method as previously discussed in claim 11 above, and furthermore teaches an elongation support (19) attached to the dummy rod (17). However, Harada et al. is silent to the elongation support being made of silicon nitride ceramics. Zushi et al. teaches using silicon nitride ceramics (col. 8, lines 17 - 21) as these ceramics having resistance to heating at high temperatures and therefore the furnace would not affect the elongation support.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad H. Smith whose telephone number is (571) 270-1294. The examiner can normally be reached on Monday-Thursday 7:30a.m. - 5:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-270-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chad H. Smith/  
AU 2874

/Michelle R. Connelly-Cushwa/  
Primary Patent Examiner  
January 4, 2008



Application/Control Number:  
10/593,274  
Art Unit: 2874

Page 8